

WHAT IS CLAIMED IS:

1. A method for coating at least a portion of at least one device, comprising:
arranging on a surface of a substrate a solution;
directing a beam at the substrate, the beam heating the substrate; and
arranging the at least one device in an ejection cone formed by a vaporization of the solution.
2. The method of claim 1, wherein the solution is vaporized by a heat transfer from the substrate to the solution.
3. The method of claim 1, wherein the ejection cone includes one of a vaporized solution and an atomized solution, the atomized solution being formed by an explosive vaporization of the solution.
4. The method of claim 1, wherein the solution includes a bioactive agent dissolved in a solvent, the solvent having a boiling point less than a thermal damage temperature of the bioactive agent.
5. The method of claim 4, further comprising ejecting by a vaporization of the solution at least a portion of the bioactive agent into the ejection cone.
6. The method of claim 4, wherein the bioactive agent includes at least one of a drug and a polymer.
7. The method of claim 4, further comprising, after the directing of the beam operation, directing a gas flow to transport the bioactive agent to the at least one device.
8. The method of claim 1, further comprising:
enclosing the substrate and the at least one device in an enclosure; and
removing by a pump the solvent in the vaporization of the solution from the enclosure.
10. The method of claim 8, wherein the enclosure is maintained at a partial vacuum.

11. The method of claim 1, wherein the arranging of the solution is by one of spraying and spin coating.
12. The method of claim 1, wherein the solution absorbs about zero energy of the beam.
13. The method of claim 1, wherein the substrate is one of flat, concave, and convex.
14. The method of claim 1, wherein the beam is one of a laser beam, an electron beam, and a light beam produced by a flashlamp.
15. The method of claim 1, wherein the beam is pulsed.
16. The method of claim 1, further comprising moving the beam with respect to the substrate.
17. The method of claim 1, further comprising moving the substrate with respect to the beam.
18. The method of claim 1, wherein the at least one device includes at least one medical appliance.
19. The method of claim 18, wherein the at least one medical appliance includes at least one stent.
20. The method of claim 1, further comprising:
 - arranging on the solution another solution, the other solution including a bioactive agent dissolved in a solvent; and
 - ejecting by the vaporization of the solution at least a portion of the other solution into the ejection cone.
21. The method of claim 20, wherein the arranging of other solution is by one of spraying and spin coating.

22. The method of claim 20, wherein the other solution absorbs about zero energy of the beam.
23. The method of claim 20, wherein:
 - the solvent of the other solution has a higher boiling point than a boiling point of the solution; and
 - the boiling point of the solution is less than a thermal damage temperature of the bioactive agent.
24. The method of claim 20, wherein the bioactive agent includes at least one of a drug and a polymer.
25. A system for coating at least one device, comprising:
 - a target assembly adapted to hold a substrate having a solution arranged on a surface of the substrate;
 - a beam source directed at the surface of the substrate and adapted to emit a beam; and
 - an arrangement adapted to hold the at least one device in an ejection cone, an apex of the ejection cone being at a target point that the beam contacts the surface.
26. The system of claim 25, wherein a vaporized agent is formed from the solution being vaporized by a heat transfer from the substrate to the solution.
27. The system of claim 26, wherein an atomized agent is formed by an explosive vaporization of the solution.
28. The system of claim 27, further comprising a gas source adapted to transport one of the vaporized agent and the atomized agent from the surface to the at least one device.
29. The system of claim 25, further comprising an evaporation chamber adapted to enclose at least the substrate and the at least one device.

30. The system of claim 29, further comprising a pump adapted to remove a solvent from the evaporation chamber, the pump forming a partial vacuum in the evaporation chamber.
31. The system of claim 25, wherein the beam source includes one of a laser, an electron beam source, and a flashlamp.
32. The system of claim 25, wherein the solution includes at least one of a drug and a polymer.
33. The system of claim 25, wherein the at least one device includes at least one medical appliance.
34. The system of claim 25, wherein one of the target assembly and the beam source is adapted to move with respect to the other of the target assembly and the beam source.
35. The system of claim 25, wherein the target assembly is adapted to spin, a spinning of the target assembly causing the solution to spread on the surface.
36. The system of claim 25, further comprising an arrangement for spraying the solution on the surface of the substrate.
37. A medical appliance having a coating applied by a method, the method comprising:
arranging on a surface of a substrate a solution;
directing a beam at the substrate, the beam heating the substrate; and
arranging the medical appliance in an ejection cone formed by a vaporization of the solution.
38. The medical appliance of claim 37, wherein the solution is vaporized by a heat transfer from the substrate to the solution.
39. The medical appliance of claim 37, wherein the ejection cone includes one of a vaporized solution and an atomized solution, the atomized solution being formed by an explosive vaporization of the solution.

40. The medical appliance of claim 37, wherein:
the solution includes a bioactive agent dissolved in a solvent, the solvent having a boiling point less than a thermal damage temperature of the bioactive agent;
and
the vaporized solution ejects at least a portion of the bioactive agent into the ejection cone.
41. The medical appliance of claim 40, wherein the bioactive agent includes at least one of a drug and a polymer.
42. The medical appliance of claim 37, further comprising:
arranging on the solution another solution, the other solution including a bioactive agent dissolved in a solvent; and
ejecting by the vaporized solution at least a portion of the other solution into the ejection cone.
43. The medical appliance of claim 37, wherein the medical appliance includes a stent.
44. The medical appliance of claim 37, wherein the coating includes a masking material.
45. The medical appliance of claim 37, wherein the coating is chosen from a group consisting of a polymer with a suspended drug, a non-thrombogenic agent, a lubricious material, a non-slippery material, a radioactive agent, and a magnetic signature.
46. The medical appliance of claim 37, wherein the coating is a radiopaque agent.